

RESEARCH REPORT

Understanding SNAP Take-Up and Short-Term Community College Outcomes in Virginia

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Executive Summary

The Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps) has been shown to reduce food insecurity (Mabli et al. 2013; Ratcliffe, McKernan, and Zhang 2011). But despite documented food insecurity among college students, particularly at two-year schools, SNAP benefits are difficult to access (Blagg, Rainer, and Washington 2020; Hope Center for College, Community, and Justice, n.d.). This report aims to show which community college students take up SNAP benefits, despite access hurdles, and the association between SNAP take-up and short-term higher education outcomes.

Using administrative data from Virginia, we find, in line with the narrow program rules for college student access, that SNAP use among students who appear eligible is more prevalent among independent students and among students with incomes below the federal poverty level. Compared with students who appear eligible for SNAP but do not take it up, SNAP users are more likely to be female, are more likely to be Black, and are more likely to fund their education with student loans. When controlling for student characteristics, we do not observe substantial differences in short-term student persistence outcomes between those who take up SNAP and those we predict might be eligible but do not take it up. Our study suggests the need for additional experimental work looking at the effects of inducing eligible students to take up social safety net benefits.

Understanding SNAP Take-Up and Short-Term Community College Outcomes

Advocates and lawmakers have pointed to increased SNAP access as a means of alleviating food insecurity among college students. Federal legislators have called for expanding the criteria for SNAP benefit receipt among low-income students, and some states, such as Massachusetts and Michigan, have broadened SNAP access by redefining some community college programs as career and technical education programs to meet program eligibility rules. But it is still difficult for most students to obtain SNAP. Income-eligible students must meet certain criteria (e.g., they must be working at least 20 hours a week, caring for a young child, or participating in a work-study program) to receive benefits.

We use a dataset of students enrolled in the 2015–16 fall cohort in Virginia community colleges, matched to a dataset of people in households taking up SNAP benefits. We use this dataset to look at the characteristics of students who use SNAP and to understand the association between SNAP use and short-term outcomes, such as persistence into the spring semester and the freshman retention rate (returning to school in the 2016–17 school year).

College Students Face Different Eligibility Hurdles for SNAP

College students face additional hurdles when applying for SNAP. All applicants in Virginia must have an annual household income and a current bank balance below certain thresholds that vary by age (and disability status) of household members. College students enrolled at least half time must meet further restrictions put in place by the Food and Agriculture Act of 1977. The rationale for this change was that college students may appear, on paper, to have fewer resources than they actually do (CLASP 2017). For example, a student who works 10 hours a week but receives substantial financial support from her family may appear to be income eligible for SNAP but may not need the benefit.

Income-eligible college students ages 18 to 49 enrolled at least half time must also meet one of the following criteria:

- be disabled

- receive public assistance benefits through Temporary Assistance for Needy Families (TANF)
- participate in a state or federal work-study program
- work at least 20 hours a week
- care for a dependent younger than 6
- care for a dependent younger than 12 and not have sufficient child care to meet work requirements, or be a single parent enrolled full time
- be assigned to or placed in a college or school through certain employment and training programs (including those authorized by the Workforce Investment Act of 1998), a career and technical education program (as defined by the Perkins Vocational and Technical Education Act of 2006), or programs operated by the state or local government (Lower-Basch and Lee 2014)

Demographic Characteristics, Outside of Eligibility Factors, Can Affect SNAP Take-Up

Barriers to SNAP access for eligible applicants—related to time (filling out forms, driving, learning about the process) and money (transportation costs, missed work)—are not felt equally across demographic groups. The history of the US social safety net is inextricably tied to racism. Although these policies do not explicitly limit benefits on the basis of race or ethnicity, social safety net regulations have disproportionately, and likely intentionally, harmed certain groups, including Black people or recent immigrants. For example, the Social Security Act of 1935 excluded agricultural and domestic workers from coverage, and at the time, 65 percent of employed African Americans worked in these sectors (DeWitt 2010).

During the welfare reform debates under the Clinton administration, tightened restrictions were often justified by supporters as punitive or “tough love” and accompanied by racist imagery of Black or Hispanic women in poverty (Sparks 2003). Researchers have found that states with larger shares of Black residents have TANF programs with less generous benefits and more restrictive behavioral requirements (Hahn et al. 2017; Soss, Fording, and Schram 2008), and work requirements, a key component of SNAP, have racist anti-Black origins and historically tended to accompany growing Black populations in states (Minoff 2020; Wilkerson 2010).

Additionally, recent confusion over the public charge rule has created a chilling effect on SNAP take-up among eligible adults in families where at least one member was not a permanent resident (Bernstein et al. 2020). This rule exacerbates heightened levels of fear experienced by people in mixed-

status families in relation to social safety net benefits. Stigma, too, weighs heavily on many users' minds (Heflin and Ziliak 2008). Would-be clients weigh the costs associated with the process and receipt of SNAP against the value of the benefits themselves. Some believe their expected benefits do not outweigh the transactional costs (Shannon et al. 2019).

SNAP participation also varies by the age of the eligible person, though the student restrictions affect only adults ages 18 to 49. Young adults have significantly higher unemployment rates than older adults.¹ Meeting work requirements for able-bodied adults without dependents may be harder for this group.²

Food and Other Basic Needs Insecurities Are Associated with Poorer Educational Outcomes

Surveys indicate that many college students self-report experiencing food insecurity (Chaparro et al. 2009; Goldrick-Rab et al. 2018; Innis, Bishop, and Boloudakis 2020; Maroto, Snelling, and Linck 2015; Weaver et al. 2019). A survey looking at the correlation between food insecurity and grade point average (GPA) found that, in alignment with previous literature, Black, Hispanic, first-generation, and Pell-eligible students reported higher rates of food insecurity, and those students tend to have lower GPAs than their peers (Camelo and Elliott 2019). Food insecurity among college students has also been associated with being independent, having poor academic outcomes, and having poor health (Breuning et al. 2017). At community colleges, a large share of students self-report experiencing food insecurity, identifying as Black or a person of color, being financially independent, and having lower GPAs (Innis, Bishop, and Boloudakis 2020; Maroto, Snelling, and Linck 2015).

The long-term academic implications of food insecurity are not as clear. At one university, Phillips, McDaniel, and Croft (2018) found from survey responses and administrative records of 600 students that experiencing food insecurity was associated with students being more likely to consider dropping out, reduce their course load, and neglect their academic studies. But van Woerden, Hruschka, and Bruening (2019) found that, although their sample of food-insecure students had lower GPAs than their food-secure peers, food insecurity was not correlated with statistically significant differences in persistence.

Research suggests that fully meeting students' basic needs, through financial aid or in-kind supports, yields better academic outcomes. Previous studies have shown that financial aid improves student academic outcomes, such as persistence, graduation rates, postgraduation earnings, and on-

time graduation (Clotfelter, Hemelt, and Ladd 2018; Denning, Marx, and Turner 2019; Goldrick-Rab et al. 2012; Long, n.d.; Mendoza, Mendez, and Malcolm 2009). These effects were seen through the receipt of grant aid or aid that covered costs incurred beyond tuition (Clotfelter, Hemelt, and Ladd 2018).

Nonpecuniary supports, combined with need-based grant aid, directed at economically disadvantaged college students could further offset expenses students may encounter, such as transportation or food costs. College programs, such as the Accelerated Student Assistance Program (ASAP) originating within the City University of New York system, that provide comprehensive and targeted supports have yielded higher graduation rates, persistence, and credit accumulation (Kolenovic, Linderman, and Karp 2013; Weiss et al. 2019). As part of ASAP, low-income community college students were given MetroCards to support their travel to school. Kolenovic, Linderman, and Karp (2013) hypothesize that unexpected or unaffordable transportation costs might have inhibited students' academic "momentum." Similarly, we hypothesize that supporting students' food needs, either through grant aid for living costs or food benefits, such as SNAP, could improve their academic outcomes.

Programs That Strengthen Food Security Improve K–12 Academic Outcomes

Most recent studies examining the impact of food benefits on educational outcomes are concentrated in K–12 education, looking at the Community Eligibility Provision (CEP) and SNAP receipt. The CEP was implemented nationally in 2014 and allows primary and secondary schools to qualify for all-school free lunch programs if the school meets a certain threshold for share of students from low-income families (Greenberg, Blagg, and Rainer 2019). Evidence from these studies frequently show a positive, though sometimes small, result. Studies show that after the CEP was implemented, students showed increases in school lunch participation (Gordon and Ruffini 2018) and improvements in academic performance, including math grades (Gordanier et al. 2020; Ruffini 2018). Students were also less frequently suspended (Gordon and Ruffini 2018) and saw reading scores improve (Gordanier et al. 2020). SNAP recipients have higher math test scores (Cotti, Gordanier, and Ozturk 2018), and the long-run outcomes include higher education attainment (Hinrichs 2010).

Because of data limitations, CEP participation has not yet been found to be correlated with improved health outcomes (Gordon and Ruffini 2018), but the receipt of SNAP and other food-specific public benefits has been shown to improve health (Carlson and Keith-Jennings 2018). Researchers have used the timing of benefit receipt to understand how SNAP receipt can affect students' health and

academic performance. Health improvements were observed in the short run (Hinrichs 2010) and the long run (Hoynes, Schanzenbach, and Almond 2016).

Isolating the Effects of SNAP Participation on College Students' Outcomes

Our study seeks to understand the relationship between SNAP take-up and higher education outcomes. Isolating the effects of SNAP receipt is difficult. First, SNAP and other social safety net benefits are consistently underreported in surveys like the Current Population Survey, for reasons that include stigma or fear of retaliation (Stevens, Fox, and Heggeness 2018). Both nonresponse and inaccurate responses have become common (Meyer, Mok, and Sullivan 2015). In this report, we have access to administrative data from Virginia that represent the entire universe of participants.

More relevant to our research is selection into SNAP. Eligible participants are more disadvantaged and prone to adverse health outcomes than eligible nonparticipants (Bitler 2016; Gundersen, Jolliffe, and Tiehen 2009). Because participants self-select into the program, raw estimates of the relationship between SNAP participation and later outcomes likely underestimate the benefits of SNAP. When we investigate the relationship between SNAP receipt and academic outcomes, we may expect similar endogeneity, as students from low-income backgrounds face lower college persistence and graduation rates (NCES 2015). This is caused by several factors: low-income students work more hours and have less time to study (Carnevale and Smith 2018) or have more difficulty paying tuition, first-generation students may have less knowledge about school resources, and low-income students are more likely to have attended underresourced K–12 schools.

SNAP take-up among eligible participants varies by state, in part because the federal government gives states latitude to impose additional restrictions or make funds available more broadly. States are also in charge of administrative upkeep of SNAP, including application forms, websites, and physical locations. As of 2016, not all states have online applications, and even fewer states have online application information available in Spanish,³ let alone other languages. The quality and intuitiveness of state portals varies. Clients in rural locations may be particularly disadvantaged, both because they are less likely to have high-speed internet access and because they are potentially farther away from the nearest SNAP office. Many researchers have instrumented changes in state policy or practice to look at how SNAP affects health outcomes (Borjas 2004; Denteh 2017; Fayaz Farkhad, Meyerhoefer, and Dearden 2017; Gregory et al. 2012; Potochnick 2016). Ratcliffe, McKernan, and Zhang (2011) use state policy differences in addition to state differences in spending on SNAP outreach to show that SNAP may reduce the likelihood of being food insecure by 20 percent. Other research has applied state

variations to an analysis in which SNAP participants were matched to nonparticipants who were demographically similar (by race or ethnicity, sex, age, education, and income as a share of the federal poverty level) except for differences in treatment of the instrumental variable (Rigdon et al. 2017).

Using Administrative Data to Look at SNAP and Community College Student Outcomes

It is difficult to directly measure the impact of SNAP receipt on outcomes. Households enrolled in SNAP self-select into the program and may have more need than households that are eligible for the program but do not enroll. Thus, a direct comparison of SNAP participants, relative to those who are SNAP eligible but do not participate, might not be the best comparison. SNAP participants in our sample may have greater needs, such as personal debt or lack of a family safety net, that affect their outcomes as a student as well as their likelihood to rely on SNAP.

Data Sample

In this study, we use a dataset of students who were recorded as part of the 2015–16 fall cohort at one of Virginia’s 23 community colleges.⁴ These administrative data were linked to other individual-level data on SNAP participation and quarterly wages. To capture any potential differences in outcomes between SNAP participants and people who have similar circumstances but do not participate, we build two separate samples. We do not have enough information to fully assess whether a student is eligible for SNAP, but these samples are designed to identify students who appear more likely to be eligible:

1. INDEPENDENT STUDENTS APPEARING TO MEET COLLEGE SNAP RULES ON HOURS, WAGES, AND CREDIT HOURS

- We restrict our analysis to independent students, who are typically 24 or older or are married, have legal dependents, or meet other criteria for financial independence when applying for aid.
- We do not observe hours worked directly but use quarterly wage data to assess whether it appears the student was employed for an average of at least 20 hours a week at the legal minimum wage—that is, making a minimum of \$580 a month (\$7.25 an hour x 20 hours x 4 weeks). The student is deemed eligible if she makes more than this amount but less than 130 percent of the federal poverty level for her household size (as reported on the Free Application for Federal Student Aid, or FAFSA).

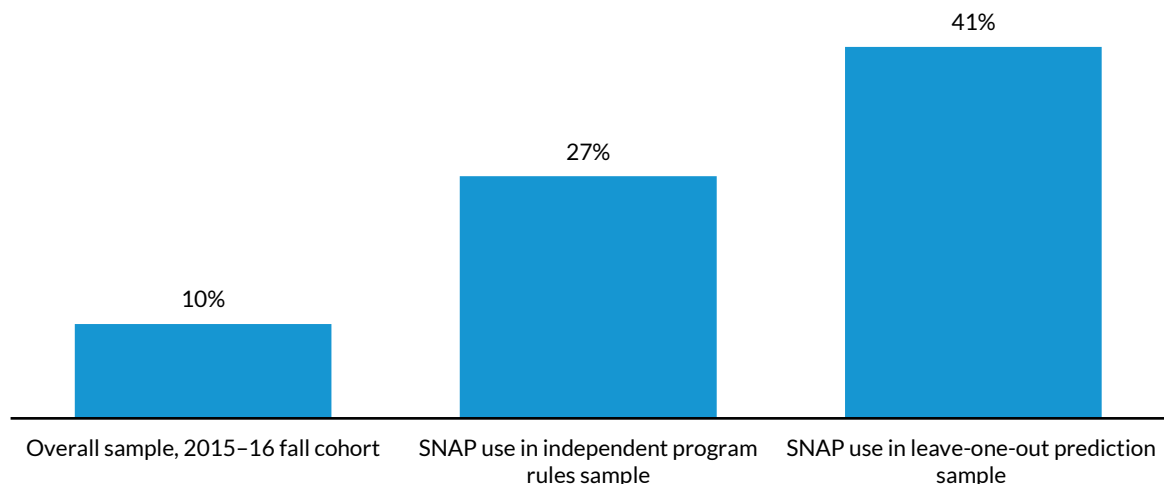
- We look only at students enrolled at least half time and who are subject to rules for college students.

2. STUDENTS PREDICTED TO BE ELIGIBLE FOR SNAP, USING A LINEAR PROBABILITY MODEL BASED ON INCOME AND FAMILY SIZE CHARACTERISTICS OF SNAP PARTICIPANTS AT OTHER COMMUNITY COLLEGES

- We restrict our analysis by using a linear probability model to predict the likelihood of a student being on SNAP, using data that inform eligibility, such as quarterly wage data, income relative to family size, dependency status interacted with family size, and participation in work-study.
- Because our hypothesis is that a student's institution affects her take-up of SNAP, we predict the likelihood of SNAP take-up based on participation for all students except those at the same institution.
- Students are included in our sample if they are in the top 20 percent of predicted SNAP take-up values.
- We look only at students enrolled at least half time and who are subject to rules for college students.

FIGURE 1
Share of Students Using SNAP in Predicted-SNAP Samples,
Compared with the Overall Student Population

Share of SNAP users



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Source: Urban Institute analysis of Virginia higher education data.

Note: SNAP = Supplemental Nutrition Assistance Program.

This approach yields three groups: the full sample of fall cohort students in 2015–16, a sample of independent students who appear eligible for SNAP based on program rules, and a sample of students who are predicted to be SNAP participants based on data that inform program rules (e.g., income, family size, and dependency). Our two “likely users” samples are more than twice as likely to take up SNAP than in our broader community college sample (figure 1). We focus on these two “likely users” samples so that we compare the outcomes of those who appear most likely to be eligible for SNAP but do not take it up with those who appear eligible and do take up the benefit.

Methodology

Researchers have used statistical techniques—primarily, instrumental variable regressions—to try to separate out the influence of self-selection into SNAP on other outcomes, such as food insecurity or health status. In the same way, we attempted to use statistical methods to isolate SNAP use among those who are eligible for the program and to reduce self-selection bias. Compared with ordinary least squares (OLS) regressions, these regression estimates may be stronger indications of the true association between SNAP use and student outcomes but may still be biased by unobservable characteristics, particularly at the institution level.

Before embarking on our quantitative study, we conducted qualitative background research, seeking to understand the Department of Social Services (DSS) system within Virginia and the community college system. We interviewed financial aid officers at community colleges and DSS staff who help administer SNAP and other programs. Through these conversations, we discovered potential mechanisms for untangling the relationship between self-selection into SNAP and SNAP’s effects on outcomes.

The first approach we considered was to look at the effects of work requirement waivers on SNAP participation. Virginia waivers for SNAP work requirements were set after the 2008 recession and were pulled back at the county level as local economies recovered. But these work requirements do not apply to college students. The program rules for workers and those who enroll through the student pathway are separate. Because of this, work requirement waivers would affect student take-up of SNAP only indirectly, if at all.

The second approach we considered was to use age cutoffs to look at how losing SNAP resources affects outcomes. SNAP’s student eligibility criteria create boundaries in eligibility based on age. For example, a 49-year-old student is subject to SNAP student rules, but a 50-year-old student is not. Similarly, the program is available to students who are still 17 and part of a household receiving SNAP.

SNAP is also available to the parents of children who are 6 or younger or are younger than 12 and participating in child care. DSS staff spoke about having families come up against these age barriers (in particular, for students who turn 18 and are enrolling in community college), but we did not find enough cases in the data.

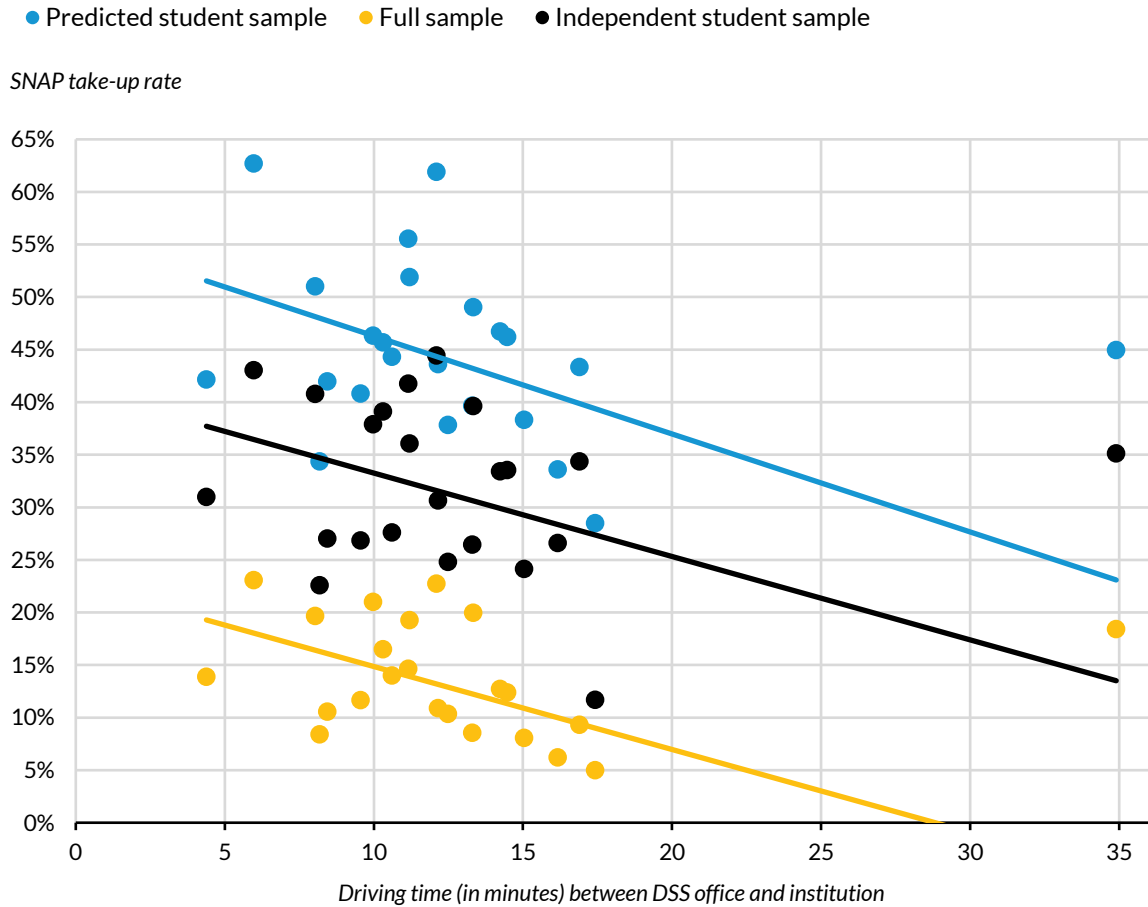
The third strategy we considered was to take advantage of the fact that the distance that a community college is from the nearest DSS office partly determines the use of SNAP benefits. Through our conversations with DSS staff and financial aid staff, we learned that some community colleges had stronger relationships with local social services agencies than others. These connections include both formal agreements and unofficial relationships. Two DSS representatives in different counties described close relationships with a local college, which hosts job skills training programs (SNAP Employment and Training, or SNAP E&T) available for free or at a low cost to DSS customers. This program meets training requirements for TANF, and a program coordinator at the college keeps DSS officers informed about upcoming courses and enrollment.

Several DSS offices also noted participation in local job and education fairs hosted at community colleges. One office has a strong relationship with a college. A college employee identifies students who are likely eligible for benefits and walks them through the process. Caseworkers also support student success by helping clients complete the FAFSA and explaining how and when time spent on coursework can count toward work requirements. They may also communicate with colleges to verify class attendance.

The underlying theory of this approach is that eligible students will be more likely to apply for SNAP benefits—and that SNAP users are more likely to try community college—if they are on a campus that is close to a DSS office. We find that for every minute closer that a likely eligible student's main community college campus is to a DSS office, the student is 0.4 to 1.8 percentage points (depending on the model) more likely to be enrolled in SNAP (figure 2).⁵ But this relationship is weak, and we also find a small relationship between DSS-institution distance and the outcomes we test. As a result, the relationship in the instrumental variables specifications generally tend to be overly large. Although we do not present the results of our instrumental variables regressions here, they are consistent with our OLS findings and are available upon request.

FIGURE 2

Correlation between Drive Times from DSS Offices to Institutions and SNAP Take-Up Rates on Campus



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Source: Urban Institute analysis of Virginia higher education data.

Notes: DSS = Department of Social Services; SNAP = Supplemental Nutrition Assistance Program. Trend lines exclude outlier institutions.

In our analysis, we look at the relationship between SNAP receipt and three short-term academic outcomes: continued enrollment in the spring semester (1) among all fall 2015 students and (2) among fall 2015 freshmen enrolled in an academic (transfer-eligible) program, and (3) enrollment in the 2016–17 school year among fall 2015 freshmen. We use persistence because academic indicators such as GPA are not available in our data and because levels of expected performance may vary by institution and program. In our sample, we do not filter out students participating in SNAP E&T programs (i.e., who obtained SNAP first and then enrolled in an employment or training program at a community college). Our second analysis, which focuses on freshmen students enrolled in academic (bachelor's degree or

transfer-eligible) programs, assesses the outcomes of students who may be enrolled at a community college and are part of a household using SNAP but are enrolled independent of an E&T program.

Results

We find that community college students who are part of households that use SNAP are more financially disadvantaged than students who appear eligible for the benefit but do not take it up. Broadly, we find that SNAP receipt is not associated with a significant difference in short-term academic outcomes among Virginia community college students, compared with similar students who did not receive SNAP. We obtain these results in our fully specified OLS regressions (with institution fixed effects and student-level demographic and financial aid controls). The following sections detail our results.

Descriptive Results

Even within our sample of those who are likely eligible for SNAP, students who did take up SNAP while enrolled in community college generally have even more financial disadvantage. Students who use SNAP tend to have lower incomes, experience deeper poverty, and are more likely to use student loans to help finance their education than non-SNAP users. SNAP users in our sample are also more likely to be female and are more likely to be Black.⁶ In our independent student sample, SNAP users are more likely to be from a household of at least two, indicating that they are more likely to have a spouse or dependent children. Our methodology attempts to control for the additional disadvantage that SNAP users may experience, but these descriptive results indicate that SNAP users might still experience unobserved challenges (table 1).

TABLE 1

Characteristics of Independent Students versus Predicted SNAP Users

	Independent Students			Predicted SNAP Users		
	Full sample	SNAP users		Full sample	SNAP users	
Share of FPL	114%	62%	*	73%	56%	*
Annual income on FAFSA	\$20,087	\$11,952	*	\$16,101	\$12,574	*
Share of COA covered by grants	24%	27%	*	30%	30%	
Pell grant amount	\$3,107	\$3,547	*	\$3,889	\$3,843	
Pell grant receipt	87%	98%	*	98%	98%	
Has loans	33%	36%	*	22%	26%	*
Female	63%	78%	*	68%	76%	*
Black	37%	48%	*	38%	45%	*
White	45%	41%	*	41%	38%	*
Hispanic	8%	6%	*	10%	9%	*
Asian	4%	1%	*	5%	3%	*
Other race or unreported	5%	4%	*	6%	5%	*
Family size of 1	45%	25%	*	9%	6%	*
Family size of 2	21%	28%	*	24%	25%	
Family size of 3 or more	33%	47%	*	67%	69%	

Source: Urban Institute analysis of Virginia higher education data.

Notes: COA = cost of attendance (i.e., tuition, fees, and estimated living costs); FAFSA = Free Application for Federal Student Aid; FPL = federal poverty level; OLS = ordinary least squares; SNAP = Supplemental Nutrition Assistance Program. Asterisks indicate differences that are statistically significant at the $p < 0.05$ level.

Ordinary Least Squares Results

Our OLS results indicate that, with no controls for institution attended or demographic characteristics, SNAP recipients are 3 to 7 percentage points less likely to enroll in the spring semester relative to students who also appear eligible for SNAP but do not take up the benefit (table 2). And SNAP participants enrolled in programs that could lead to a transfer and bachelor's degree are nearly 10 percent less likely to continue into the next academic year relative to those who do not take up SNAP. But as we account for the institution students attend and students' demographic and financial aid characteristics, these differences become statistically insignificant. Within our sample, SNAP recipients appear to have more financial need, but controlling for these characteristics, students who receive SNAP do not appear to do observably better or worse in persisting in their community college programs.

TABLE 2

OLS Regression Results for the Relationship between SNAP Receipt and Student Persistence Outcomes

	Independent Students				Predicted SNAP Users			
	Enrollment in spring, all fall students				Enrollment in spring, all fall students			
SNAP recipient	-0.0687** (0.0140)	-0.0578** (0.0143)	-0.0437** (0.0158)	-0.0330* (0.0138)	-0.0368** (0.0140)	-0.0221 (0.0141)	-0.0183 (0.0145)	-0.00493 (0.0124)
Institution fixed effects		X	X	X		X	X	X
Student demographic controls			X	X			X	X
Student financial aid controls				X				X
Observations	5,111	5,111	5,111	5,111	4,046	4,046	4,046	4,046
R ²	0.005	0.014	0.026	0.216	0.002	0.018	0.034	0.295
	Enrollment in spring, all fall freshman BA students				Enrollment in spring, all fall freshman BA students			
SNAP recipient	-0.0606** (0.0222)	-0.0521* (0.0229)	-0.0382 (0.0246)	-0.0180 (0.0219)	-0.0193 (0.0192)	-0.00692 (0.0193)	-0.00405 (0.0196)	-0.00155 (0.0169)
Institution fixed effects		X	X	X		X	X	X
Student demographic controls			X	X			X	X
Student financial aid controls				X				X
Observations	2,293	2,293	2,293	2,293	2,063	2,063	2,063	2,063
R ²	0.004	0.011	0.023	0.217	0.001	0.019	0.035	0.293
	Enrollment in 2016–17, freshman students				Enrollment in 2016–17, freshman students			
SNAP recipient	-0.0980** (0.0253)	-0.0742** (0.0260)	-0.0508 (0.0281)	-0.0306 (0.0271)	-0.0304 (0.0228)	-0.00780 (0.0228)	0.00800 (0.0234)	0.0146 (0.0218)
Institution fixed effects		X	X	X		X	X	X
Student demographic controls			X	X			X	X
Student financial aid controls				X				X
Observations	2,309	2,309	2,309	2,309	2,063	2,063	2,063	2,063
R ²	0.007	0.03	0.047	0.108	0.001	0.038	0.075	0.186

Source: Urban Institute analysis of Virginia higher education data.

Notes: BA = bachelor's degree; COA = cost of attendance (i.e., tuition, fees, and estimated living costs); OLS = ordinary least squares; SNAP = Supplemental Nutrition Assistance Program. Robust standard errors are in parentheses.

* $p < 0.1$; ** $p < 0.05$.

Next Steps for Understanding How Food Supports Can Facilitate Success in Higher Education

Community college students who take up SNAP appear to experience more financial disadvantages than potentially eligible peers who do not use the benefit. But our results indicate that, controlling for these differences, SNAP users do not have significantly different academic outcomes, as measured by short-term persistence in higher education, relative to their peers. Given evidence on the importance of financial supports on higher education outcomes, as well as evidence on the link between food supports and academic outcomes in K–12 education, we believe this null result points to the need for additional research.

It seems plausible that food supports such as SNAP, along with other basic needs supports, could improve students' higher education outcomes, relative to a counterfactual where these supports are not present. Given our results using administrative data, a better test of this hypothesis might be to implement a randomized controlled trial, where community college students who are eligible for SNAP are randomly encouraged to take up the benefit.⁷

It might also be possible that those who do not use SNAP benefits (but appear to be eligible based on observable characteristics) use other food supports, such as on- or off-campus food pantries. Access to other food sources by non-SNAP users might explain our null result. Further study of whether and how students use food pantries could illuminate how on-campus services might substitute for social services or how these additional supports facilitate student success.

A final explanation for our results might be that the current SNAP rules for college students both help and hurt academic achievement. Additional financial supports for food may ease a student's financial strain, but the burden of maintaining eligibility (in terms of hours worked or maintaining work-study status) reduces the benefit's positive effects.

Options for Policymakers

Our examination of administrative data from Virginia, and of the rules surrounding access to social safety net benefits, demonstrates a “tangled web” of basic needs supports for college students (Blagg, Rainer, and Washington 2020). Students who use SNAP while enrolled at Virginia community colleges are also more likely to rely on supports such as student loans, compared with demographically similar

peers who do not use SNAP. Policymakers who wish to expand SNAP benefits, or to further support low-income students' living costs, have several potential policy options:

- **Directly support student take-up of SNAP benefits.** A 2018 Government Accountability Office report found that millions of students who would qualify for SNAP were not taking advantage of the program (GAO 2018). The report suggests that the US Department of Agriculture's Food and Nutrition Service could make student eligibility easier to understand and could work with regional offices and states to take advantage of flexibilities within the program (e.g., expanding the definition of Perkins workforce-development programs that would convey eligibility).
- **Ease some SNAP restrictions for students.** The College Student Hunger Act of 2019, proposed by Senator Elizabeth Warren, eases student work requirements (from 20 hours to 10 hours) and broadens eligibility criteria.
- **Promote and fund campus-based supports.** Food supports such as food pantries and "food swipe" donation programs are increasingly popular on campuses, but these supports are not uniformly available and are often funded by donations. State and federal policymakers could provide dedicated resources or programs to public institutions for these direct supports.⁸

Attainment of a postsecondary credential helps facilitate mobility out of poverty. Our results indicate the need for further study of the effects of basic needs supports, such as SNAP, on academic outcomes in higher education.

Appendix

TABLE A.1

Full OLS Regression Results, Independent Students

Variables	Enrollment in spring, all fall students	Enrollment in spring, all fall students	Enrollment in spring, all fall freshman students	Enrollment in spring, all fall freshman students	Enrollment in 2016–17, freshman students	Enrollment in 2016–17, freshman students
SNAP recipient	-0.0687*** -0.014	-0.0330** -0.0138	-0.0606*** -0.0222	-0.018 -0.0219	-0.0980*** -0.0253	-0.0306 -0.0271
Share of FPL (1 = 100%)		0.149*** -0.0162		0.166*** -0.0235		0.123*** -0.0281
Share of FPL (squared)		-0.00147*** -9.88e-05		-0.00161*** -0.000145		-0.00142*** -0.00017
Annual income on FAFSA		-1.49e-06* -8.33e-07		-1.80e-06 -1.21e-06		-6.38e-07 -1.49e06
Family size of 2 (1 = yes)		-0.0493*** -0.0152		-0.0707*** -0.0229		-0.0459 -0.0287
Family size of 3 or more (1 = yes)		-0.0529*** -0.0178		-0.0650** -0.0257		-0.0347 -0.0332
Asian		-0.00893 -0.0808		-0.0985 -0.117		-0.00333 -0.162
Black		-0.0756 -0.0781		-0.155 -0.114		-0.0917 -0.157
Pacific Islander		0.193** -0.0863		0.0584 -0.127		0.153 -0.221
White		-0.0261 -0.0777		-0.125 -0.114		-0.0163 -0.157
Multiracial		-0.0745 -0.0824		-0.173 -0.118		-0.125 -0.161
Unknown race or ethnicity		-0.0258 -0.0959		-0.148 -0.147		0.126 -0.2
Hispanic		-0.035 -0.0796		-0.121 -0.116		-0.062 -0.159
Female		0.0371***		0.0247		0.0181

Variables	Enrollment in spring, all fall students	Enrollment in spring, all fall students	Enrollment in spring, all fall freshman students	Enrollment in spring, all fall freshman students	Enrollment in 2016–17, freshman students	Enrollment in 2016–17, freshman students
		-0.0117		-0.0171		-0.0215
Share of COA covered by grants		1.782***		1.791***		1.201***
		-0.0553		-0.0886		-0.0929
Has loans (1 = yes)		0.107***		0.0837***		-0.00176
		-0.0127		-0.019		-0.0234
Constant	0.782***	0.193**	0.790***	0.354***	0.573***	0.233
	-0.00674	-0.0846	-0.0096	-0.124	-0.0116	-0.169
Institution fixed effects		X		X		X
Observations	5,111	5,111	2,293	2,293	2,309	2,309
R ²	0.005	0.216	0.004	0.217	0.007	0.108

Source: Urban Institute analysis of Virginia higher education data.

Notes: COA = cost of attendance (i.e., tuition, fees, and estimated living costs); FAFSA = Free Application for Federal Student Aid; FPL = federal poverty level; OLS = ordinary least squares; SNAP = Supplemental Nutrition Assistance Program. Robust standard errors are in parentheses.

** $p < 0.05$; *** $p < 0.01$.

TABLE A.2

Full OLS Regression Results, Predicted-SNAP Students

Variables	Enrollment in spring, all fall students	Enrollment in spring, all fall students	Enrollment in spring, all fall freshman students	Enrollment in spring, all fall freshman students	Enrollment in 2016–17, freshman students	Enrollment in 2016–17, freshman students
SNAP recipient	-0.0368*** (0.0140)	-0.00493 (0.0124)	-0.0193 (0.0192)	-0.00155 (0.0169)	-0.0304 (0.0228)	0.0146 (0.0218)
Share of FPL (1 = 100%)		0.0541* (0.0278)		0.0732* (0.0380)		0.150*** (0.0499)
Share of FPL (squared)		-0.000786*** (0.000193)		-0.000846*** (0.000269)		-0.00158*** (0.000344)
Annual income on FAFSA		1.89e-06 (1.16e-06)		6.33e-07 (1.59e-06)		-1.45e-06 (2.09e-06)
Family size of 2 (1 = yes)		-0.0144 (0.0252)		-0.0545* (0.0329)		-0.0315 (0.0410)

Variables	Enrollment in spring, all fall students	Enrollment in spring, all fall students	Enrollment in spring, all fall freshman students	Enrollment in spring, all fall freshman students	Enrollment in 2016–17, freshman students	Enrollment in 2016–17, freshman students
Family size of 3 or more (1 = yes)		-0.0547** (0.0242)		-0.0837*** (0.0312)		-0.000158 (0.0389)
Asian		0.113 (0.0998)		0.0578 (0.188)		-0.0332 (0.185)
Black		0.0420 (0.0975)		0.0128 (0.187)		-0.178 (0.181)
Pacific Islander		0.304*** (0.114)		0.322* (0.195)		0.392** (0.195)
White		0.0801 (0.0973)		0.0440 (0.186)		-0.0713 (0.181)
Multiracial		0.0544 (0.101)		-0.00655 (0.190)		-0.201 (0.185)
Unknown race or ethnicity		0.165 (0.106)		0.154 (0.191)		0.152 (0.190)
Hispanic		0.0751 (0.0986)		0.0525 (0.187)		-0.166 (0.183)
Female		0.0390*** (0.0128)		0.0300* (0.0171)		0.0166 (0.0216)
Share of COA covered by grants		1.932*** (0.0545)		1.893*** (0.0809)		1.484*** (0.0863)
Has loans (1 = yes)		0.118*** (0.0159)		0.107*** (0.0230)		-0.000541 (0.0288)
Constant	0.764*** (0.00869)	0.0226 (0.102)	0.785*** (0.0114)	0.110 (0.190)	0.557*** (0.0137)	0.110 (0.188)
Institution fixed effects		X		X		X
Observations	4,046	4,046	2,063	2,063	2,063	2,063
R ²	0.002	0.295	0.001	0.293	0.001	0.186

Source: Urban Institute analysis of Virginia higher education data.

Notes: COA = cost of attendance (i.e., tuition, fees, and estimated living costs); FAFSA = Free Application for Federal Student Aid; FPL = federal poverty level; OLS = ordinary least squares; SNAP = Supplemental Nutrition Assistance Program. Robust standard errors are in parentheses.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Notes

- ¹ “Labor Force Statistics from the Current Population Survey: A-10. Unemployment Rates by Age, Sex, and Marital Status, Seasonally Adjusted,” Bureau of Labor Statistics, last updated November 6, 2020, <https://www.bls.gov/web/empsit/cpseea10.htm>.
- ² Brandon Stratford, “Changes to SNAP Should Reflect the Unique Needs of Young Adults,” Child Trends blog, May 23, 2018, <https://www.childtrends.org/blog/changes-to-snap-should-reflect-the-unique-needs-of-young-adults>.
- ³ “Online Services for Key Low-Income Benefit Programs: What States Provide Online with Respect to SNAP, TANF, Child Care Assistance, Medicaid, CHIP, and General Assistance,” Center on Budget and Policy Priorities, last updated July 29, 2016, <https://www.cbpp.org/research/online-services-for-key-low-income-benefit-programs>.
- ⁴ Virginia started a pilot program to facilitate the partnership of Department of Social Services offices with community college workforce development training programs, starting in fall 2016. This analysis pre-dates this program by one year. See “Grants: Workforce Grants,” Elevate Virginia, accessed December 2, 2020, <https://elevatevirginia.org/practitioners-corner/grants/>.
- ⁵ In our sample, one school is exceptionally far (more than 30 minutes’ drive) from a DSS office. Our results are similar regardless of whether this school is included, but our instrumental variable estimate is strengthened by excluding the institution.
- ⁶ As a check on our results, we ran our analyses separately for Black students and white students (where samples were large enough to do so). We did not see appreciable differences in the results for these demographics groups when run separately.
- ⁷ Similar to the way students were induced to take up federal student loans in Marx and Turner (2018).
- ⁸ Grace Tatter, “Food Insecurity on College Campuses,” *Usable Knowledge* (blog), Harvard Graduate School of Education, November 15, 2018, <https://www.gse.harvard.edu/news/uk/18/11/food-insecurity-college-campuses>.

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